

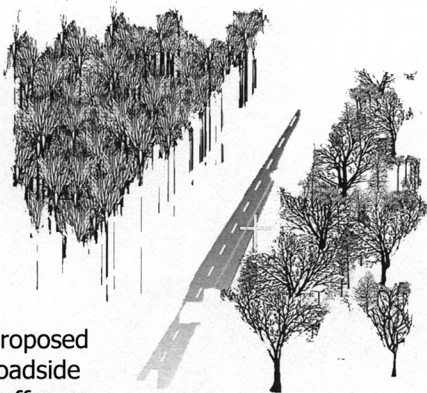
## Bits and Chokers

### **Stormwise: Preparing Connecticut's Forests for the Future**

TIMPRO CT members have seen this time and again in Connecticut: A storm rages through leaving downed trees and limbs tangled in power and telephone lines or blocking streets and driveways. In the course of restoring service and access, the offending branches are cut away and many surviving trees often undergo severe pruning to prevent future outages. The aesthetic results are rarely pretty.

Now a joint state and private forestry effort, *Stormwise*, is developing an "innovative approach to forest stewardship" to help prevent both the outages and the unsightly pruning of roadside trees. At stake is more than the beauty of our streets and highways: limbs and trees cost the state of Connecticut and utilities millions in cleanup, to say nothing of the cost of private property damage.

With funding from the US Forest Service and utilities, *Stormwise* seeks to develop a multi-faceted approach to the problem. It includes new ways to survey existing forests, to predict potential damage, to carry out preventive thinning and cutting, and, above all, to identify more storm-resilient trees along our roads. The project is deploying a range of tools from high-tech LiDAR (light detection and ranging technology) to on-the-ground assessment at twelve locations throughout the state. The data will help identify trees at risk of damage



Proposed roadside buffer

from extreme weather and of causing damage to utility lines. This will enable the state to develop management practices to produce resilient roadside forests.

Without question, storm damage will still require removal of some trees within the proposed 100' roadside buffer zone, a strip that includes the public right of way and additional public or private land. To cover the cost of removal, the study is identifying high-value utilization options for wood from harvested or trimmed trees.

Of special interest to TIMPRO CT, the project is working on protocols for loggers to collaborate with utility companies in harvesting trees adjacent to utility lines. Understandably, few loggers will cut trees if there is even a chance that the trees fall onto lines. The risk of electrocution or paying for damages to lines or poles is not worth the value of the sawlogs. However, if the utilities drop those trees as part of their enhanced line treatment immediately before or during a harvest, everyone wins. Utilities will have removed trees that will eventually fall on power lines (gravity always wins), loggers will be able to move those trees to the log deck, and landowners may get a few extra dollars.

The project is being led by: Thomas A. Worthley, Associate Extension Professor, Middlesex County Extension Center; Dr. Mark Rudnicki and Dr. John Violin, University of Connecticut, Department of Natural Resources and the Environment; and Dr. Jeffrey Ward, Connecticut Agricultural Experiment Station. Additional participants are the Forestry Division of the CT-DEEP, Northeast Utilities, the Metropolitan District Commission, Audubon Connecticut, White Memorial Foundation, and the Natural Resources Conservation Service.



A CLP Lineman at work

But *Stormwise* goes well beyond a consideration of forestry issues. It also includes a look at how utilities can improve infrastructure, how communities can enhance the delivery of services, and how land-use policies can reduce the sprawl that adds to risk and maintenance costs. With climate change models suggesting Connecticut will experience more severe storms and damage in the future, *Stormwise* is a first step to preserving our state's forests.

### Putting Downed Trees and Limbs to Good Use



Left, a plant growing in commercial compost. Right, one in biosolid/wood compost.

biosolids and wood from trees that had already been downed by storms or infested with EAB. The chipped wood is delivered to processing sites where it is mixed with biosolids and stacked in open windrows. Following strict Environmental Protection Agency guidelines, temperatures in the stacks are allowed to rise to 60' C – higher than the mandated 55' C – for 15 days to kill any pathogens in the biosolids and to sterilize the chips. Backhoes and loaders flip windrows more than the mandated 5 times in 15 days to improve the resulting quality of the compost. The careful processing results in a compost that is stable and gives off little odor.

Dr. Lakhwinder Hundal, Supervising Environmental Scientist for MWRD, says, "This started as a pilot project. So, we'll be buying windrow turners and other special equipment now that we're established."

MWRD is planning to sell the compost. Commercial compost here sells for \$35/cubic yard. "But it isn't close to ours in richness or quality. Ours has many more nutrients," Dr. Hundal notes. And the picture bears him out. He concludes, "Even a small municipality can do this and it's a good use of something available continuously through the year in large quantities."

As this picture illustrates, composting waste wood with biosolids can be a win-win solution for communities faced with a growing number of downed or diseased trees to dispose of.

In Chicago, the Metropolitan Water Reclamation District (MWRD) treats over 1 billion gallons of sewage and rainwater a day. Treatment leaves behind about 165,000 dried tons of biosolids to process into fertilizer for agricultural and landscape use.

In 2013 MWRD began an experiment mixing



Turning windrows of mixed biosolids and waste wood

Photos courtesy MWRD